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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,730	04/04/2002	Luet Lok Wong	PO2353US1	5069

7590 10/16/2002

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EXAMINER
BERTOGLIO, VALERIE E

ART UNIT	PAPER NUMBER
1632	12

DATE MAILED: 10/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	10/018,730	WONG ET AL.	
	Examiner	Art Unit	
	Valarie Bertoglio	1632	

-- The MAILING DATE of this communication appears n the cover sheet with the correspondence address --

Period f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *30days* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *20-37* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *Election/Restriction* .

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 20-28,35, drawn to a process for oxidizing a halo aromatic substrate with a monooxygenase enzyme.

Group II, claim(s) 29-32, 35, drawn to drawn to a process for oxidizing a halo aromatic substrate with a cell that expresses a monooxygenase enzyme, an electron transfer reductase and redoxin.

Group III, claim(s) 33, drawn to a cell expressing monooxygenase, an electron transfer reductase and an electron transfer redoxin.

Group IV, claim(s) 34, drawn to a transgenic plant.

Group V, claim(s) 34, drawn to a transgenic animal.

Group VI, claim(s) 35, drawn to a method of treating a locus contaminated with a halo aromatic substance using a transgenic animal.

Group VII, claim(s) 35, drawn to a method of treating a locus contaminated with a halo aromatic substance using a transgenic plant.

Group VIII, claim(s) 36, drawn to a process for selecting a mutant by screening a library.

Group IX, claim(s) 37, drawn to a process of oxidizing a halo aromatic substrate using a mutant monooxygenase.

The inventions listed as Groups I-XI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Groups I and II lack unity because, the process for oxidizing a halo aromatic substrate in vitro comprised different reagents and method steps than the process for oxidizing a halo aromatic substrate using cells.

Groups I and III lack unity because, the process for oxidizing a halo aromatic substrate in vitro does not require the cells of Group III. The protocols and reagents required for the process and the cells and are materially distinct and separate. The process does not require the cells and the cells do not require the process.

Groups I and IV lack unity because the process for oxidizing a halo aromatic substrate in vitro does not require the transgenic plants of Group IV. The protocols and reagents required for the process and the transgenic and are materially distinct and separate. The process does not require the transgenic and the transgenic does not require the process.

Groups I and V lack unity because the process for oxidizing a halo aromatic substrate in vitro does not require the transgenic animal of Group V. The protocols and reagents required for the process and the transgenic and are materially distinct and separate. The process does not require the transgenic and the transgenic does not require the process.

Group I and Groups VI or VII lack unity because the methods are materially different and plurally independent from each other. Each group is practiced with materially different process steps and technical considerations and requires materially distinct protocols and reagents. Group I is directed to oxidizing a substrate in vitro while Groups VI-VII are directed to treating a locus using a transgenic organism.

Groups I and VIII lack unity because the process for oxidizing a halo aromatic substrate in vitro does not require the methods of selecting a mutant monooxygenase. The protocols and reagents required for the process and the method of selecting a mutant monooxygenase are materially distinct and separate. The process does not require the method and the method does not require the process.

Groups I and IX lack unity because, the process of Group I for oxidizing a halo aromatic substrate in vitro does not utilize or require the mutant monooxygenase of Group IX and the process of Group IX does not use the monooxygenase of Group I. The protocols and reagents required for the processes are materially distinct and separate.

Groups II and III lack unity because the process for oxidizing a halo aromatic substrate using a cell does not necessarily require the cells of Group III. The process does not require the cells and the cells do not require the process.

Groups II and IV lack unity because, the process for oxidizing a halo aromatic substrate in vitro using cells does not require the transgenic plants of Group IV. The protocols and reagents required for the process using cells and the transgenic and are materially distinct and separate. The process does not require the transgenic and the transgenic does not require the process.

Groups II and V lack unity because, the process for oxidizing a halo aromatic substrate using cells does not require the transgenic animal of Group V. The protocols and reagents required for the process and the transgenic and are materially distinct and

separate. The process does not require the transgenic and the transgenic does not require the process.

Group II and Groups VI or VII lack unity because the methods are materially different and plurally independent from each other. Each group is practiced with materially different process steps and technical considerations and requires materially distinct protocols and reagents. Group II is directed to oxidizing a substrate in vitro while Groups VI-VII are directed to treating a contaminated locus using a transgenic organism.

Groups II and VIII lack unity because the process for oxidizing a halo aromatic substrate using cells does not require the methods of selecting a mutant monooxygenase. The protocols and reagents required for the process and the method of selecting a mutant monooxygenase are materially distinct and separate. The process does not require the method and the method does not require the process.

Groups II and IX lack unity because, the process for oxidizing a halo aromatic substrate using cells does not require the mutant monooxygenase of Group IX. The protocols and reagents required for the process and the method of selecting a mutant monooxygenase are materially distinct and separate. The process does not require the method and the method does not require the process.

Groups III and IV lack unity because the cells of Group III do not require the transgenic plants of Group IV. The protocols and reagents required for the cells and the transgenic and are materially distinct and separate. The process does not require the transgenic and the transgenic does not require the process.

Groups III and V lack unity because the cells of Group III do not require the transgenic animal of Group V. The protocols and reagents required for the cells and the transgenic and are materially distinct and separate. The cells do not require the transgenic and the transgenic does not require the cells.

Group III and Groups VI or VII lack unity because the cells can be used in vitro to study oxidation while the methods of Groups VI or VII can be used to treat a contaminated locus. The cells do not require the methods of Groups VI or VII and the methods of Groups VI or VII do not necessarily require the cells.

Groups III and VIII lack unity because the cells of Group III do not require the methods of selecting a mutant monooxygenase. The protocols and reagents required for the cells and the method of selecting a mutant monooxygenase are materially distinct and separate. The cells do not require the method and the method does not require the cells.

Groups III and IX lack unity because the cells of Group III do not require the process of Group IX. The protocols and reagents required for the cells and the method are materially distinct and separate. The cells do not require the method and the method does not require the cells.

Groups IV and V lack unity because the transgenic plant of Group IV is genetically and materially distinct from the transgenic animal of Group V. The protocols and reagents required for the plant and the animal are different. The plant does not require the animal and the animal does not require the plant.

Group III and Groups VI or VII lack unity because the transgenic plant I can be used to study oxidation while the methods of Groups VI or VII can be used to treat a contaminated locus. The transgenic plant does not require the methods of Groups VI or VII and the methods of Groups VI or VII do not necessarily require the transgenic plant.

Groups IV and VIII lack unity because the transgenic plant of Group IV does not require the methods of selecting a mutant monooxygenase. The protocols and reagents required for the transgenic plant and the method of selecting a mutant monooxygenase are materially distinct and separate. The transgenic plant does not require the method and the method does not require the transgenic plant.

Groups IV and IX lack unity because transgenic plant of Group IV does not require the method of using a mutant monooxygenase of Group IX. The protocols and reagents required for the transgenic plant and the method of using a mutant monooxygenase are materially distinct and separate. The transgenic plant does not require the method and the method does not require the transgenic plant.

Group V and Groups VI or VII lack unity because the transgenic animal can be used to study oxidation while the methods of Groups VI or VII can be used to treat a contaminated locus. The transgenic animal does not require the methods of Groups VI or VII and the methods of Groups VI or VII do not necessarily require the transgenic animal.

Groups V and VIII lack unity because the transgenic animal of Group V does not require the methods of selecting a mutant monooxygenase. The protocols and reagents required for the transgenic animal and the method of selecting a mutant

monooxygenase are materially distinct and separate. The transgenic animal does not require the method and the method does not require the transgenic animal.

Groups V and IX lack unity because transgenic animal of Group V does not require the method of using a mutant monooxygenase of Group IX. The protocols and reagents required for the transgenic animal and the method of using a mutant monooxygenase are materially distinct and separate. The transgenic animal does not require the method and the method does not require the transgenic animal.

Groups VI and VII lack unity because the methods are materially different and plurally independent from each other. Each group is practiced with materially different process steps and technical considerations and requires materially distinct protocols and reagents. Group VI requires a transgenic animal. Group VII requires a transgenic plant.

Groups VI or VII and VIII lack unity because Groups VI or VII are directed to treating a locus while Group VIII is directed to selecting a mutant. The methods are materially different and plurally independent from each other. Each group is practiced with materially different process steps and technical considerations and requires materially distinct protocols and reagents. The purpose of Group VI is different from that of Group VIII.

Groups VI or VII and IX lack unity because Groups VI or VII are directed to treating a locus while Group VIII is directed to oxidizing a halo aromatic substrate using a monoxygenase. The methods are materially different and plurally independent from

each other. Each group is practiced with materially different process steps and technical considerations and requires materially distinct protocols and reagents.

Groups VIII and IX lack unity because the protocols and reagents required for screening a library to identify a mutant monooxygenase and the method of using a mutant monooxygenase to oxidize a halo aromatic compound are materially distinct and separate. Furthermore, the method of oxidizing a halo aromatic compound can be carried out using a wild type monooxygenase. The method of screening for a mutant monooxygenase does not require the process of oxidizing a halo aromatic compound and the process of oxidizing a halo aromatic compound does not necessarily require the method of screening for a mutant monooxygenase.

If Applicant elects Group I, claim 35 will only be considered as it relates to treating a locus using a monooxygenase enzyme.

If Applicant elects Group II, claim 35 will only be considered as it relates to treating a locus with cells that express a monnoxygenase enzyme, an electron transfer reductase, and redoxin.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Valarie Bertoglio whose telephone number is 703-305-5469. The examiner can normally be reached on 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Reynolds can be reached on 703-305-4051. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

Valarie Bertoglio
Patent Examiner

MICHAEL C. WILSON
PATENT EXAMINER